



*JW*  
PATENT  
Case SU-7275

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ERIC W. LIIMATTA

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SERIAL NO.: 10/603,130

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FILED: JUNE 24, 2003

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MICROBIOCIDAL CONTROL IN THE  
PROCESSING OF POULTRY

}

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
Sir:

**FOURTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Enclosed herewith for consideration by the Examiner is a Fourth Supplemental Information Disclosure Form PTO/SB/08A and PTO/SB/08B. There are 118 items listed, but only 93 are enclosed.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "John F. Sieberth".

John F. Sieberth  
Reg. No. 17,704  
Associate Attorney of Record

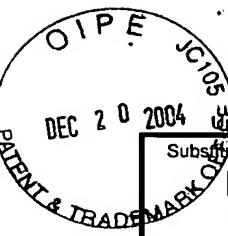
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Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Fourth Supplemental  
(use as many sheets as necessary)

Sheet

1

of

8

**Complete if Known**

Application Number	10/603,130
Filing Date	June 24, 2003
First Named Inventor	Eric W. Liimatta
Group Art Unit	---
Examiner Name	---

Attorney Docket Number SU-7275

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
US-18	US-1995639		03-26-1935	Henderson	
US-19	US-2443429		06-15-1948	Marks	
US-20	US-2662855		09-07-1950	Kamlett	
US-21	US-2779764		01-29-1957	Paterson	
US-22	US-2815311		12-03-1957	Ellis, et al.	
US-23	US-3412021		11-19-1968	Paterson	
US-24	US-3519569		07-07-1970	Diaz	
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US-27	US-4235599		11-25-1980	Davis, et al.	
US-28	US-4297224		10-27-1981	Macchiarolo, et al.	
US-29	US-4557926		12-10-1985	Nelson, et al.	
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US-34	US-5209934		05-11-1993	Ekis, et al.	
US-35	US-5264136		11-23-1993	Howarth, et al.	
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US-38	US-5683654		11-04-1997	Dallmier, et al.	
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US-40	US-6068861		05-30-2000	Moore, et al.	
US-41	US-6069142		05-30-2000	Gaffney, et al.	
US-42	US-6284144 B1		09-04-2001	Itzhak	

**FOREIGN PATENT DOCUMENTS**

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		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
FP-8	WO 89/10696		11-16-1989	Great Lakes Chemical		

Examiner Signature	Date Considered

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	10/603,130
Fourth Supplemental (use as many sheets as necessary)				Filing Date	June 24, 2003
Sheet	2	of	8	First Named Inventor	Eric W. Liimatta
				Group Art Unit	---
				Examiner Name	---
				Attorney Docket Number	SU-7275

<b>OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
	L-35	Clare, A.S., "Marine Natural Product Antifoulants: Status and Potential," <i>Biofouling</i> (1996) 9: 211-229.		T <sup>2</sup>
	L-36	S. Tsukamoto, et al., "Ceratinamides A and B: New Antifouling Dibromotyrosine Derivatives from the Marine Sponge <i>Pseudoceratina purpurea</i> ," <i>Tetrahedron</i> (1996) 52: 8181-8186.		
	L-37	W. Miki, K. Kon-ya, and S. Mizobuchi, "Biofouling and Marine Biotechnology: New Antifoulants from Marine Invertebrates," <i>Journal of Marine Biotechnology</i> (1996) 4: 117-120.		
	L-38	H. Genthe, "The Incredible Sponge," <i>Smithsonian</i> (August 1998) 29: 50-58.		
	L-39	M. Givskov, et al., "Eukaryotic Interference with Homoserine Lactone-Mediated Prokaryotic Signaling," <i>Journal of Bacteriology</i> (1996) 178: 6618-6622.		
	L-40	D. Ren, J.J. Sims, and T.K. Wood, "Inhibition of Biofilm Formation and Swarming of <i>Bacillus subtilis</i> by (5Z)-4-Bromo-5-(Bromomethylene)-3-Butyl-2(5H)-Furanone," <i>Letters in Applied Microbiology</i> (2002) 34: 293-299.		
	L-41	M.E. Weeks, "Discovery of the Elements: XVII. The Halogen Family," <i>Journal of Chemical Education</i> (1932) 9: 1915-1938.		
	L-42	A.J. Balard, <i>Annales de Chemie et de Physique</i> (1826), vol 32, ppg 371-372.		
	L-43	H.S. Rzepa, "Elemental and Molecular Heritage: An Internet-Based Display," <i>Molecules</i> (1998) 3: 94-99.		
	L-44	B. Grinbaum and M. Friedman, "Bromine," in <i>Kirk-Othmer Encyclopedia of Chemical Technology</i> 4 <sup>th</sup> Ed. (New York, NY: John Wiley and Sons, Inc., 2001), vol 4, ppg 548-549.		
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	L-46	"Bromine Brine," Arkansas Geological Commission, web address <a href="http://www.state.ar.us/agc/bromine.htm">www.state.ar.us/agc/bromine.htm</a> ; 1 page.		
	L-47	R.D. Bartholomew, "Bromine-based Biocides for Cooling Water Systems: A Literature Review," Paper IWC 98-74 (Pittsburgh, PA: Engineers' Society of Western Pennsylvania, 1998), 30 pages.		

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	10/603,130
Fourth Supplemental (use as many sheets as necessary)				Filing Date	June 24, 2003
				First Named Inventor	Eric W. Liimatta
				Group Art Unit	---
				Examiner Name	---
Sheet	3	of	8	Attorney Docket Number	SU-7275

<b>OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	L-48	F.W. Tanner and G. Pitner, "Germicidal Action of Bromine," Proceedings of the Society for Experimental Biology and Medicine (1939) 40: 143-145.		
	L-49	T.D. Beckwith and J.R. Moser, Journal of the American Water Works Association (1933) 25: 367-374.		
	L-50	D.R. Wood and E.T. Illing, Analyst (1930), Royal Society of Chemistry, The Analyst, 55: 126-127.		
	L-51	J. A. McCarthy, Journal of the New England Water Works Association (1944) 58: 55-68.		
	L-52	O. Wyss and R.J. Stockton, "The Germicidal Action of Bromine," Arch. Biochem. (1947) 12:267-271.		
	L-53	E.A. Shilov and J.N. Gladchikova, "On the Calculation of the Dissociation Constants of Hypohalogenous Acids from Kinetic Data," Journal of the American Chemical Society (1938) 60: 490-491.		
	L-54	G.M. Fair, et al., "The Behavior of Chlorine as a Water Disinfectant," Journal of the American Water Works Association (1948) 40: 1051-1061.		
	L-55	E.K. Rideal and U.R. Evans, "The Effect of Alkalinity on the Use of Hypochlorites," Journal of the Society of the Chemical Industry (1921) 40: 64R-66R		
	L-56	C.K. Johns, "Germicidal Power of Sodium Hypochlorite," Industrial and Engineering Chemistry (1934) 26: 787-788.		
	L-57	G.R. Dychala, "Chlorine and Chlorine Compounds" in Disinfection, Sterilization, and Preservation 4 <sup>th</sup> Ed., S.S. Block, ed., pp. 137-138 and 149-15, (Philadelphia, PA, Lea & Febiger, 1991).		
	L-58	T. Kristoffersen and I.A. Gould, "Effect of Sodium Bromide on the Bactericidal Effectiveness of Hypochlorite Sanitizers of High Alkalinity," Journal of Dairy Science (1958) 41: 950-955.		
	L-59	G.U Houghton, "Bromine Content of Underground Waters. II. Observations on the Chlorination of Water Containing Free Ammonia and Naturally Occurring Bromide", Journal of the Society of the Chemical Industry (1946) 65: 324-328		
	L-60	H. Farkas-Himsley, "Killing of Chlorine-Resistant Bacteria by Chlorine-Bromine Solutions," Applied Microbiology (1964) 12: 1-6.		
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	L-62	J.K. Johannesson, "The Bromination of Swimming Pools," American Journal of Public Health (1960) 50: 1731-1736.			
	L-63	J.D. Johnson and W. Sun, "Bromine Disinfection of Wastewater," in "Disinfection-Water and Wastewater," J.D. Johnson, ed., pp 179-191 (Ann Arbor, MI: Ann Arbor Science, 1975).			
	L-64	J.K. Johannesson, "Anomalous Bactericidal Action of Bromamine," Nature (1958) 181: 1799-1780.			
	L-65	J.C. Albright, "Liquid Bromine Removes Obstinate Algae from 10,000 Gallon Tower for \$2.10 a Day," Petroleum Processing (1948) 3: 421-422.			
	L-66	Y. Kott et al., "Effect of Halogens on Algae-III. Field Experiment," Water Research (1969) 3: 265-271.			
	L-67	N. Betzer and Y. Kott, "Effect of Halogens on Algae-II. <i>Cladophora sp.</i> ," Water Research (1969) 3: 257-264. 14 pages			
	L-68	Y. Kott and J. Edlis, "Effect of Halogens on Algae-I. <i>Chlorella Sorokiniana</i> ," Water Research (1969) 3: 251-256.			
	L-69	"Evolution of Industrial Water Treatment," Betz Handbook of Industrial Water Conditioning, Seventh Edition, pp 7-15 (Trevose, PA: Betz Laboratories, Inc., 1976).			
	L-70	P.J. Sullivan and B.J. Hepburn, "The Evolution of Phosphonate Technology for Corrosion Inhibition," paper 496 (Houston, TX: NACE International, 1995), ppg 496/1 - 496/13.			
	L-71	W.A. Brungs, "Effects of Residual Chlorine on Aquatic Life," Journal of the Water Pollution Control Federation (1973) 45: 2180-2193.			
	L-72	A.T. Palin, "The Determination of Free and Combined Chlorine in Water by the Use of Diethyl-p-phenylene diamine," Journal of the American Water Works Association (1957) 49: 873-880.			
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	L-76	S. Barratt and C.P. Stein, "On Bromine Chloride," Proceedings of the Royal Society (London) (1929) vol 122: 582-588.			
	L-77	J.F. Mills, "Interhalogens and Halogen Mixtures as Disinfectants," in Disinfection-Water and Wastewater, J.D. Johnson, ed., pp 113-143 (Ann Arbor, MI: Ann Arbor Science, 1975).			
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	L-82	G.D. Nelson, "Chloramines and Bromamines," in Kirk Othmer Encyclopedia of Chemical Technology, Vol. 5, pp 565-580 (New York, NY: John Wiley and Sons, 1979).			
	L-83	Z. Zhang and J.V. Matson, "Organic Halogen Stabilizers: Mechanisms and Disinfection Efficiencies," paper TP89-05 (Houston, TX: Cooling Tower Institute, 1989), pgs 1-19.			
	L-84	J.C. Peterson, "Practical Air Washer Treatment in Synthetic Fiber Manufacturing Plants," paper IWC-87-39 (Pittsburgh, PA: Engineers' Society of Western Pennsylvania, 1987), pgs 366-370			
	L-85	D. Vanderpool, M. Killoran, and R. Sergent, "Improving the Corrosion Inhibitor Efficiency of Tolytriazole in the Presence of Chlorine and Bromine," paper 157 (Corrosion 87, San Francisco, CA, 1987), ppg 157/1-157/9.			
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	L-88	D.S. Larson, et al., "Improved Microbiological Control Using Halogen Donors in a Pasteurizer," MBAA Technical Quarterly (1993) 30: 173-178.			

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	L-89	P. Sweeney, M. Ludensky, and O. Barokhov, "Mill Performance of a Brominated Methylethylhydantoin Slimicide," pp 437-447, Proceedings of the 1999 TAPPI Papermakers Conference (Norcross, GA: TAPPI, 1999).	
	L-90	F.J. Himpler, P.G. Sweeney, and M.L. Ludensky, "The Benefits of a Hydantoin-Based Slimicide in Papermaking Applications," APPITA Journal (September 2001) 54: 427-430.	
	L-91	C.J. Nalepa, "New Bromine-Releasing Granules for Microbiological Control of Cooling Water," paper 03716 (Corrosion 2003 Houston, TX: NACE International, 2003), ppg 03716/1-03716/15.	
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	L-93	Z. Zhang, "Disinfection Efficiency and Mechanisms of 1-Bromo-3-Chloro-5,5-Dimethylhydantoin," Doctoral Dissertation, University of Houston, May 1988, ppg 160, 162, 163.	
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	10/603,130
Fourth Supplemental (use as many sheets as necessary)				Filing Date	June 24, 2003
Sheet	7	of	8	First Named Inventor	Eric W. Liimatta
				Group Art Unit	---
				Examiner Name	---
				Attorney Docket Number	
				SU-7275	

<b>OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	L-103	Howarth et al., "First Field Trials of Single-Feed, Liquid Bromine Biocide For Cooling Towers", Paper TP00-09 (Houston, Tx.: Cooling Technology Institute, Jan. 31-Feb 2, 2000), 17 pages		
	L-104	M. Enzien and B. Yang, "On-line Performance Monitoring of Treatment Programs for MIC Control," paper 01279 (Corrosion 2001, Houston, TX: NACE International, 2001), 13 pages.		
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	L-114	"AWT Legionella Position Paper: 2003 Update," (McLean, VA: Association of Water Technologies, 2003). ppg 1-33.		

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	L-115	"Minimizing the Risk of Legionellosis Associated with Building Water Systems," ASHRAE Guideline 12-2000 (Atlanta, GA: ASHRAE, 2000), 19 pages.			
	L-116	"Legionellosis Guideline: Best Practices for Control of Legionella," (Houston, TX: Cooling Tower Institute, February 2000), 8 pages.			
	L-117	Legionellosis: Guidelines for Control of Legionnaires' Disease," (Melbourne, Australia: Health Department Victoria, 1989, (reprinted in 1999), 9 pages.			
	L-118	"Control of Legionella in Cooling Towers: Summary Guidelines," (Madison, WI: Wisconsin Division of Health, August 1987), 45 pages.			
	L-119	M.R. Freije, "Legionellae Control in Health Care Facilities: A Guide for Minimizing Risk," (Indianapolis, IN: HC Information Resources, Inc., 1996, ppg 25-41.			
	L-120	Regulatory Advisory, Waterborne Pathogens - Compliance with Joint Commission on Accreditation of Healthcare Organizations Requirements, web address <a href="http://www.ashe.org/media/water.html">www.ashe.org/media/water.html</a> , visited 6/12/2002, 9 pages.			
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